

Hui Su

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Education

- **Ph.D.** Atmospheric Sciences, University of Washington (1998)
- **B.S. (with honors),** Atmospheric Dynamics, Peking University (1991)

Professional Experience

2015-present **Assistant Director**, Joint Institute for Regional Earth System Science and Engineering (JIFRESSE), University of California, Los Angeles, CA
2014-present **Scientist V**; Scientist IV (2007-2014); Scientist III (2006-2007); Contractor (2005-2006)
Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA
1998-2005 **Assistant Researcher**, Dept. of Atmos. Sci., University of California, Los Angeles, CA
1993-1998 **Research Assistant**, Dept. of Atmos. Sci., University of Washington, Seattle, WA
1994-1995 **Teaching Assistant**, Dept. of Atmos. Sci., University of Washington, Seattle, WA
1991-1993 **Research Assistant**, Dept. of Geophysics, Peking University, Beijing, China
1992-1993 **Teaching Assistant**, Dept. of Geophysics, Peking University, Beijing, China

Selected Awards

- **AGU Editor's Citation for Excellence in Refereeing for Earth and Space Science (2015)**
- **NASA Group Achievement Award for Hurricane and Severe Storm Sentinel team (2015)**
- **JPL Team Bonus Award for Senior Review Proposal Review (2015)**
- **NASA Group Achievement Award for Aura MLS Team (2014)**
- **JPL Team Bonus Award for Earth Ventures Proposal Team (2014)**
- **JPL Team Bonus Award for CMIP5 climate model evaluation publication (2012)**
- **JPL Team Bonus Award for EV-I proposal writing team (2012)**
- **NASA Group Achievement Award for Genesis and Rapid Intensification Process (GRIP) team (2011)**
- **NASA Exceptional Scientific Achievement Medal for major advances in the understanding of water vapor and cloud feedbacks on climate change through quantitative analysis of observations from multiple NASA satellites (2010)**
- **JPL Lew Allen Award for Excellence (2008)**
- **JPL Team Bonus Award for Hurricane team (2008)**
- **NASA Group Achievement Award for Aura MLS Science Team (2006)**

Funded Research Projects

- PI: NASA ROSES13-NASA Energy and Water Cycle Study, \$460.48K, “Constraining Climate Sensitivity Through Quantification of Circulation-Cloud Feedback Using Satellite Observations and Reanalysis Data”
- PI: NASA ROSES13-Aura Science Team, \$670.96K, “Untangling Thermodynamic and Dynamic Control of Upper-Tropospheric Water Vapor Using Aura MLS Data and CMIP5 Model Simulations”
- PI: NASA ROSES10-NASA Energy and Water Cycle Study, \$258.7K, “Using NEWS Water and Energy Cycle Products to Investigate Processes that Control Cloud Feedback”
- PI: NASA ROSES10-Aura Science Team, \$691.9K, “Investigating the Influence of Asian Aerosol Pollution on the Water Vapor Transport from the Troposphere to the stratosphere”
- PI: NASA ROSES07-Aura Science Team, \$476.3K, “Radiative Impact of Cirrus Clouds on Tropical Troposphere to Stratosphere Transport”
- PI: JPL Advanced Concepts FY14, \$34.3K, “Observation System Simulation Experiment to Evaluate Impact of CubeSat using WRF 3D-Var Data Assimilation”
- PI: JPL R&TD FY08, \$137.4K, “Studying Tropical Cirrus Radiative Effect and its Climate Feedbacks using CloudSat and other A-Train Cloud Observations”
- PI: SURP DRDF FY06, \$43.6K, “Improving Our Understanding of Large-scale Dehydration Processes Near the Tropical Tropopause by Comparing MLS Observations and the GFDL AM2 Model Simulations”
- Co-I/Institutional PI: NASA ROSES15-Precipitation Measurement Missions Science Team, \$150K (\$30K to JPL), “TRMM-GPM Precipitation Tracking and Water Cycle of the MJO”, PI: Shuyi Chen (University of Miami)

- Co-I/Institutional PI: NASA ROSES08-Hurricane Science Research Program, \$646.197K, (\$131.10K to JPL), "Investigation of tropical cyclone intensity change and genesis with EOS observations and cloud-resolving WRF model", PI: Bin Wang (University of Hawaii)
- Co-I/Institutional PI: NASA ROSES11-Hurricane Science Research Program, \$452.945K (\$100.24K to JPL), "Influence of environmental moisture on hurricane genesis and intensification: Observations and idealized modeling", PI: Robert Fovell (UCLA)
- Co-I: CloudSat Mission Operation (2010-present), \$510.0K
- Co-I: NASA ROSES14-Atmospheric Composition Modeling and Analysis, \$698.88K, "Climate Impact of Anthropogenic Emissions on Clouds, Precipitation and General Circulation", PI: Jonathan H. Jiang (JPL)
- Co-I: NASA ROSES13-NASA Data for Operation and Assessment, \$426.56K, "Using NASA Data for Post-CMIP5 Earth System Model Assessment and Improvement", PI: Jonathan H. Jiang (JPL)
- Co-I: NASA ROSES12-Modeling, Analysis and Prediction, \$999.23K, "Using A-Train Satellite Observations to Improve Cloud and Water Vapor Simulations in GISS Model-E", PI: Jonathan H. Jiang (JPL)
- Co-I: NASA ROSES10-Enhancing the Capability of Computational Earth System Models and Data for Operation and Assessment, \$469.5K, "Utilizing NASA A-Train Datasets for IPCC AR5 Climate Model Evaluation", PI: Jonathan H. Jiang (JPL)
- Co-I: NASA ROSES10-Aura Science Team, \$499.5K, "Utilizing Aura MLS and A-Train datasets to analyze and evaluate IPCC AR5 models in the upper troposphere", PI: Jonathan H. Jiang (JPL)
- Co-I: NASA ROSES09-Hurricane Field Experiment, \$522.1K, "Assessing the thermodynamic and convective structure of tropical cyclones with the HAMSR microwave sounder", PI: Bjorn Lambrigtsen (JPL)
- Co-I: NASA ROSES07-Aura Science Team, \$476.6K, "The Roles of Convection and Freeze-drying in the Tropical Tropopause Layer (TTL)", PI: William G. Read (JPL)
- Co-I: NASA ROSES07-Accelerating Operational Use of Research Data, \$500.2K, "An Integrated Information System for Improving Operational Hurricane Forecasts", PI: Svetla Hristova-Veleva (JPL)
- Co-I: NSF-Climate Dynamics and Physical Meteorology (2009-2012), \$514.015K, "Investigation of the Aerosol Indirect Effect on Ice Clouds and its Climate Impact Using A-Train Satellite Data and a GCM", PI: Yu Gu (UCLA)

Peer-Reviewed Publications (complete list in the end)

- 71 peer-reviewed publications to date (20 first-authored)
- 2008 total citations
- H-Index: 23 (see Google Scholar <http://scholar.google.com/citations?user=AUJbpg0AAAAJ&hl=en>)

Educational Activities

(1) Supervising postdoctoral scholars:

- Hanii Takahashi (2013-2015), Caltech postdoctoral scholar
- Longtao Wu (2010-2012), Caltech postdoctoral scholar

(2) Co-Supervising postdoctoral scholars with other scientists:

- Yuan Wang (2013-present), Caltech postdoctoral scholar
- Lei Huang (2013-present), Caltech postdoctoral scholar
- Panagiotis Vergados (2013-2014), currently JPL scientist
- Jennifer Small (2009-2012), currently Assistant professor at University of Hawaii at Manoa
- Rohini Bhawar (2009-2011), currently Assistant professor at University of Pune, India

(3) Service on students' thesis committee:

- Jennifer Walker, Ph.D. candidate, California Institute of Technology (2013-present)

(4) Mentoring summer students:

(A) Graduates

- Jung-Min Park, Ewha Womans University, Seoul, South Korea (2015)
- Hanii Takahashi, City University of New York, New York, New York (2012)
- Huiwen Chuang, University of Michigan, Ann Arbor, MI (2009)

(B) Undergraduates

- Nicholas Tang, University of California, Berkeley, CA (2012)

(C) High school students

- Sarah Worden, Crescenta Valley High School, CA (2013)
- Teresa Jiang, La Canada High School, CA (2010)

(5) Co-Mentoring summer students:

(A) Graduates

- Ryan Stanfield, University of North Dakota (2014)
- Patrick Brown, Duke University (2014)
- Erica Dolinar, University of North Dakota, ND (2013)
- Daniel Russell, University of California, Los Angeles, CA (2013)
- Lei Huang, University of Texas at Austin, Texas (2012)

(B) Undergraduates

- Katie Antilla, California Institute of Technology (2014)
- David Qu, California Institute of Technology (2014)
- Sze-Ning Mak, University of Hong Kong (2014)
- Tiffany Chang, Brown University, RI (2013)

(C) High school students

- Nicholas Tang, La Canada High School, CA (2010)

Professional Activities

1) Proposal panel review

- NASA ROSES09-ACMAP, ROSES11-NIP, ROSES13-TERAQ, ROSES15-NIP, NASA Earth and Space Science Fellowship (2010, 2013)
- DOE-Office of Biological & Environmental Research: 2012, 2013
- NSF Mail Review (Climate & Large-Scale Dynamics): 2007, 2010, 2012, 2015
- JPL R&TD, SURP, DRDF: 2007, 2009, 2010, 2011, 2012, 2013, 2015
- JPL EV Mission Proposal: SABLE (2011), StormSat (2011), INVEST (2012), AREX (2013), SABLE (2015)
- JPL Decadal Survey Mission-Extreme Weather RTD (2013)
- JPL Flight Project Senior Review Proposal: MLS, AIRS, CloudSat, GRACE (2013, 2015)
- JPL Edward Stone Award Science Review Panel (2014)

2) Journal article review

AGU/AMS journals, ACP, QJRMS, Climate Dynamics, 1-2 articles per month on average
IPCC Fifth Assessment Report (AR5): Government Review and Expert Review (2012)

3) Conference session convener/co-convener

- AGU Fall Meeting (2014), “Constraining climate model simulations and predictions using observations”
- AOGS (2014), “Climate feedbacks: observations, modeling and theory”, Sapporo, Japan
- AGU Fall Meeting (2013), “satellite measurements for climate model evaluation, diagnosis and improvements”
- AOGS-WPGM Joint Assembly (2012), “Asian aerosols and their impacts on regional and global climate”, Singapore City, Singapore
- CALIPSO-CloudSat-EarthCare joint workshop science committee co-chair, Paris, France (2012)
- Aura science team meeting, Boulder, CO (2010)
- AGU-WPGM (2010), “aerosol-cloud-precipitation relations: measurements and modeling”, Taipei, Taiwan
- AGU Fall Meeting (2008), “aerosol indirect effects: observations and modeling”
- AGU Fall Meeting (2006), “coordinated observations and modeling of global water vapor variability and its feedback to climate change”

4) Invited talks at major conferences or department seminars

- Oct 19, 2015, Dept. Environ. Sci. and Engineering, Ewha Womans University, Seoul, South Korea
- May 20, 2015, Monsoon Workshop, California Institute of Technology, Pasadena, CA
- Oct 16, 2013, Dept. Environ. Sci. and Engineering, Ewha Womans University, Seoul, South Korea
- Feb 5, 2013, Dept. of Atmos. Sci. Colloquia, Texas A&M University, College Station, TX
- Dec 7, 2012, AGU Fall Meeting, San Francisco, CA
- Nov 6, 2012, Convection Workshop, Dept. of Atmos. Sci., Colorado State University, Fort Collins, CO
- Oct 18, 2012, Geophysical Fluid Dynamic Laboratory, Princeton University, Princeton, NJ
- Dec 8, 2011, AGU Fall Meeting, San Francisco, CA
- May 20, 2011, Convection Workshop, Dept. of Atmos. Sci., Colorado State University, Fort Collins, CO
- June 29, 2010, Dept. of Atmos. Sci. Colloquia, National Taiwan University, Taipei, Taiwan, ROC
- June 21, 2010, Research Center for Environmental Changes, Academia Sinica, Taipei, Taiwan, ROC
- Apr 16, 2009, Dept. of Atmos. Oceanic and Space Sci. Colloquia, University of Michigan, Ann Arbor, MI
- Aug 15, 2007, Laboratory of Atmospheres Distinguished Researcher Seminar Series, NASA Goddard Space Flight Center, Greenbelt, MD
- Aug 14, 2007, National Institute of Aerospace and NASA Langley Research Center Science Lecture Series, Hampton, VA
- Jul 24, 2006, AGU/Western Pacific Geophysics Meeting (WPGM), Beijing, China

- Apr 20, 2006, Dept. of Physics Colloquia, New Mexico Institute of Mining and Technology, Socorro, NM

5) Other professional services

- JPL Earth Science Search Committee (2015-present)
- JPL Science Visitor and Colloquium Program co-coordinator (2010-present)
- JIFRESSE Merit Increase Committee (2013-present)
- JPL Earth Science Section Climate Club co-chair (2014-2015)
- JPL Center for Climate Sciences (CCS) Atmospheric Composition & Convection Workshop co-lead (2014)
- Aura Climate Working Group co-chair (2010-present)
- JPL A-Team Study (Climate Models) co-lead (2013)
- JPL Aerosol-Cloud Seminar coordinator (2010-2012)
- Judge for JPL Postdoctoral Poster Award (August 2013) and the Caltech SURF Competition (November 2013)
- Technical Symposium Committee Chair, Chinese-American Engineers and Scientists Association of Southern California (CESAEC) (2014-15)
- Scholarship Committee Chair, Chinese-American Engineers and Scientists Association of Southern California (CESAEC) (2015-present)
- Executive Committee President (2015-present), Secretary (2006-2009), Chinese-American Oceanic and Atmospheric Association (COAA), Southern California Chapter

Bibliography

Hui Su

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2. Su, H., C. S. Bretherton and S. S. Chen: Self-aggregation and large-scale control of tropical deep convection. *J. Atmos. Sci.*, 57, 1797-1816, 2000.
3. Su, H., J. D. Neelin and C. Chou: Tropical teleconnection and local response to SST anomalies during the 1997-1998 El Niño. *J. Geophys. Res.*, 106, 20,025-20,043, 2001.
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6. Su, H., and J. D. Neelin: Teleconnection mechanisms for tropical Pacific descent anomalies during El Niño. *J. Atmos. Sci.*, 59, 2682-2700, 2002.
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- troposphere: New observations from Microwave Limb Sounder on Aura Satellite, *Geophys. Res. Lett.*, L18812, doi:10.1029/2007GL030638, 2007.
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